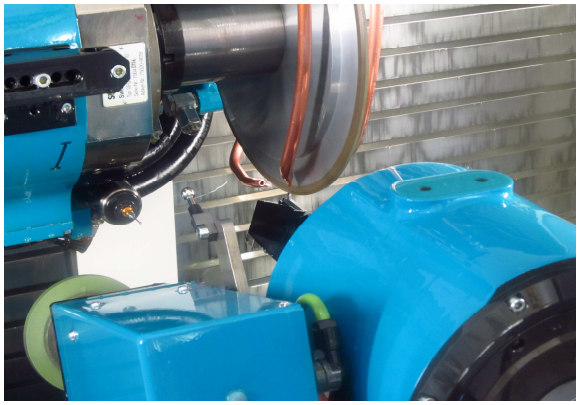
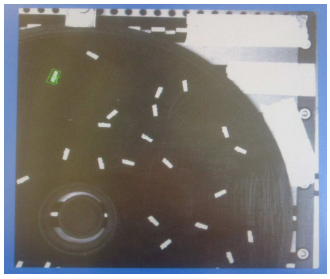
SCHNEEBERGER

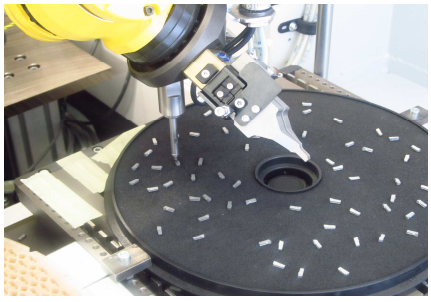
Grooving Insert B2 R0.2

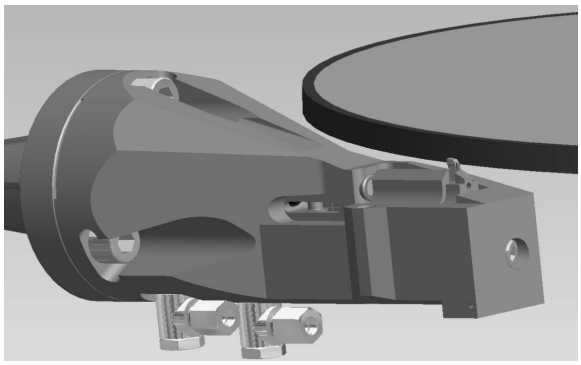
A08-010

The fully automatic grinding cycle of small grooving inserts consists of a loading operation using vacuum gripper for picking up and a **vision system** to recognize location and orientation. The part is ground in 1 pass, using a 1A1 wheel, which is dressed every 5 to 10 parts. A probing process each 3rd piece is intergrated for measuring the width.

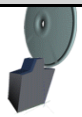




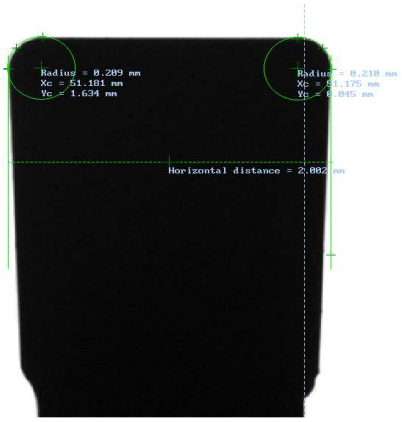




1. Cycletime for Production

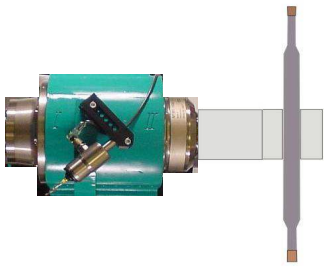
Workpiece: B 2 mm, R1 and R2 = 0.2 mm Material CARBIDE				
Operations	 Finishing	 Probing	 Dress	 Load
Feed [mm/Min]	400	2000	400	9000
Power [kW]	2	2	2	1
Cutting speed [m/s]	32		28	
Used wheels	 1		 1	
Grinding time [s]	20	3	2	7
Total cycle time	0 Min 31			

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably. Cycle time for probing each 3rd, dressing each 5 piece.



2. Used Grinding Wheels

1	14A1 Ø300 D46 B7 mm



1

3. Machine and Software Requirements

Machines: 5 axes CNC grinders : SIRIUS HPM
Control: Fanuc 31iA5
Accessories: DRESS, STL6051, VISION
Coolant: Synthetic Oil, pressure 6 bar
Software: Quinto 5

Responsible engineer: OP. 21.8.12

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TECHNOLOGY FOR TOOLING